

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

- 1           1. (Currently amended) A method for allocating computer system  
2 resources between concurrently executing workloads, comprising:
  - 3           establishing a first resource pool that specifies requirements for each of a  
4 plurality of different computer system resources, wherein the plurality of different  
5 computer system resources are components of a single computer system, wherein  
6 the computer system resources include central processing units and at least one of  
7 memory, swap space, network interfaces, and scheduling classes, and wherein  
8 establishing the first resource pool involves establishing minimum size and  
9 maximum size requirements for a given resource that can be assigned to the first  
10 resource pool;
  - 11          allocating the plurality of different computer system resources to one or  
12 more resource pools, including the first resource pool, to create a resource  
13 allocation, wherein requirements of the first resource pool are satisfied, ~~and~~  
14 wherein the resources are assigned to the first resource pool, and wherein each  
15 resource pool can use a different scheduling technique;
  - 16          wherein prior to allocating the plurality of different computer system  
17 resources, the method further comprises:
    - 18               verifying that collective requirements of the one or more  
19 resource pools can be satisfied, and  
20               if the collective requirements cannot be satisfied, signaling  
21 an error condition; and

22 wherein resources allocated to the first resource pool can change over  
23 time;  
24 binding a first process to the first resource pool, so that the first process  
25 has access to the plurality of different computer system resources allocated to the  
26 first resource pool; and  
27 storing a representation of the resource allocation to non-volatile storage  
28 so that the resource allocation can be reused after a machine failure.

1 2. (Original) The method of claim 1, wherein allocating the plurality of  
2 different computer system resources to one or more resource pools involves:  
3 partitioning each of the plurality of different computer system resources  
4 into one or more partitions, wherein a first partition is associated with a first  
5 resource and a second partition is associated with a second resource;  
6 allocating the first partition to a single resource pool, so that only  
7 processes associated with the single resource pool can access the first partition;  
8 and  
9 allocating the second partition to multiple resource pools so that processes  
10 associated with the multiple resource pools can share the second partition.

1 3 (Canceled).

1 4. (Original) The method of claim 1, wherein establishing the first  
2 resource pool involves selecting a file containing a representation of the first  
3 resource pool from a plurality of possible files.

1 5 (Canceled).

1           6. (Previously presented) The method of claim 1, wherein storing the  
2 representation of the resource allocation involves storing a representation of each  
3 of the one or more resource pools along with associated resources.

1           7. (Previously presented) The method of claim 1, wherein storing the  
2 representation of the resource allocation involves storing an Extensible Markup  
3 Language (XML) representation of the resource allocation.

1           8. (Original) The method of claim 1,  
2 wherein the first resource pool is associated with a first project; and  
3 wherein the first process is one of a plurality of processes associated with  
4 the first project.

1           9 (Canceled).

1           10. (Original) The method of claim 1, further comprising dynamically  
2 adjusting the resource allocation during system execution.

1           11 (Canceled).

1           12. (Currently amended) A computer-readable storage medium storing  
2 instructions that are executed by a computer to cause the computer to perform a  
3 method for allocating computer system resources between concurrently executing  
4 workloads, wherein the computer-readable storage medium includes one of a  
5 volatile memory, a non-volatile memory, a disk drive, a magnetic tape, a compact  
6 disc, a digital versatile disc, and a digital video disc, the method comprising:  
7           establishing a first resource pool that specifies requirements for each of a  
8 plurality of different computer system resources, wherein the plurality of different

9 computer system resources are components of a single computer system, wherein  
10 the computer system resources include central processing units and at least one of  
11 memory, swap space, network interfaces, and scheduling classes, and wherein  
12 establishing the first resource pool involves establishing minimum size and  
13 maximum size requirements for a given resource that can be assigned to the first  
14 resource pool;

15 allocating the plurality of different computer system resources to one or  
16 more resource pools, including the first resource pool, to create a resource  
17 allocation, wherein requirements of the first resource pool are satisfied, ~~and~~  
18 wherein the resources are assigned to the first resource pool, and wherein each  
19 resource pool can use a different scheduling technique;

20 wherein prior to allocating the plurality of different computer system  
21 resources, the method further comprises:

22 verifying that collective requirements of the one or more  
23 resource pools can be satisfied, and

24 if the collective requirements cannot be satisfied, signaling  
25 an error condition; and

26 wherein resources allocated to the first resource pool can change over  
27 time;

28 binding a first process to the first resource pool, so that the first process  
29 has access to the plurality of different computer system resources allocated to the  
30 first resource pool; and

31 storing a representation of the resource allocation to non-volatile storage  
32 so that the resource allocation can be reused after a machine failure.

1 13. (Original) The computer-readable storage medium of claim 12,  
2 wherein allocating the plurality of different computer system resources to one or  
3 more resource pools involves:

4           partitioning each of the plurality of different computer system resources  
5   into one or more partitions, wherein a first partition is associated with a first  
6   resource and a second partition is associated with a second resource;  
7           allocating the first partition to a single resource pool, so that only  
8   processes associated with the single resource pool can access the first partition;  
9   and  
10          allocating the second partition to multiple resource pools so that processes  
11   associated with the multiple resource pools can share the second partition.

1           14 (Canceled).

1           15. (Original) The computer-readable storage medium of claim 12,  
2   wherein establishing the first resource pool involves selecting a file containing a  
3   representation of the first resource pool from a plurality of possible files.

1           16 (Canceled).

1           17. (Previously presented) The computer-readable storage medium of  
2   claim 12, wherein storing the representation of the resource allocation involves  
3   storing a representation of each of the one or more resource pools along with  
4   associated resources.

1           18. (Previously presented) The computer-readable storage medium of  
2   claim 12, wherein storing the representation of the resource allocation involves  
3   storing an Extensible Markup Language (XML) representation of the resource  
4   allocation.

1           19. (Original) The computer-readable storage medium of claim 12,

2            wherein the first resource pool is associated with a first project; and  
3            wherein the first process is one of a plurality of processes associated with  
4            the first project.

1            20 (Canceled).

1            21. (Original) The computer-readable storage medium of claim 12,  
2            wherein the method further comprises dynamically adjusting the resource  
3            allocation during system execution.

1            22 (Canceled).

1            23. (Currently amended) A computer system that allocates computer  
2            system resources between concurrently executing workloads, comprising:  
3            an establishment mechanism that is configured to establish a first resource  
4            pool that specifies requirements for each of a plurality of different computer  
5            system resources, wherein the plurality of different computer system resources are  
6            components of a single computer system, wherein the computer system resources  
7            include central processing units and at least one of memory, swap space, network  
8            interfaces, and scheduling classes, and wherein the establishment mechanism is  
9            configured to establish minimum size and maximum size requirements for a given  
10           resource that can be assigned to the first resource pool;  
11           an allocation mechanism that is configured to allocate the plurality of  
12           different computer system resources to one or more resource pools, including the  
13           first resource pool, to create a resource allocation, wherein requirements of the  
14           first resource pool are satisfied, wherein the resources are assigned to the first  
15           resource pool, and wherein resources allocated to the first resource pool can

16 | change over time, and wherein each resource pool can use a different scheduling  
17 | technique;  
18 |       a verification mechanism that is configured to verify that collective  
19 | requirements of the one or more resource pools can be satisfied;  
20 |       wherein if the collective requirements cannot be satisfied, the verification  
21 | mechanism is configured to signal an error condition;  
22 |       a binding mechanism that is configured to bind a first process to the first  
23 | resource pool, so that the first process has access to the plurality of different  
24 | computer system resources allocated to the first resource pool; and  
25 |       an archiving mechanism that is configured to store a representation of the  
26 | resource allocation to non-volatile storage so that the resource allocation can be  
27 | reused after a machine failure.

1       24. (Previously presented) The computer system of claim 23, wherein the  
2 | allocation mechanism is configured to:

3       partition each of the plurality of different computer system resources into  
4 | one or more partitions, wherein a first partition is associated with a first resource  
5 | and a second partition is associated with a second resource;

6       allocate the first partition to a single resource pool, so that only processes  
7 | associated with the single resource pool can access the first partition; and to

8       allocate the second partition to multiple resource pools so that processes  
9 | associated with the multiple resource pools can share the second partition.

1       25 (Canceled).

1       26. (Previously presented) The computer system of claim 23, wherein the  
2 | establishment mechanism is configured to select a file containing a representation  
3 | of the first resource pool from a plurality of possible files.

1           27 (Canceled).

1           28. (Previously presented) The computer system of claim 23, wherein the  
2   archiving mechanism is configured to store a representation of each of the one or  
3   more resource pools along with associated resources.

1           29. (Previously presented) The computer system of claim 23, wherein the  
2   archiving mechanism is configured to store an Extensible Markup Language  
3   (XML) representation of the resource allocation.

1           30. (Previously presented) The computer system of claim 23,  
2           wherein the first resource pool is associated with a first project; and  
3           wherein the first process is one of a plurality of processes associated with  
4   the first project.

1           31 (Canceled).

1           32. (Previously presented) The computer system of claim 23, further  
2   comprising an adjustment mechanism that is configured to dynamically adjust the  
3   resource allocation during system execution.

1           33 (Canceled).